of time. Following a suggestion by Metchinkoff, COLEMAN (*Ann. de l'Inst. Pasteur,* 1915, xxix, 139) studied the effect of butyric acid absorbed from the bowel upon the arterial system. He points out that different quantities of butryic acid are found in the intestinal contents, the quantity in some individuals being much higher than in others on account of bacterial decomposition. Certain anerobic bacteria (B. Butyricus, B. Welchii, B. sporogenes) are particularly prone to produce butyric acid in the intestine. A fair amount of this acid is absorbed and appears in the blood. Nine guinea-pigs were carefully studied and four of them were found with "cartilaginous" plaques in the aorta. Calcareous masses were not present in any of the arteries or organs. His figures agreed with those of Dratchinski who found that 50 per cent. of the guinea-pigs had "cartilaginous" plaques in the arteries. Coleman then attempted to feed guinea-pigs with butyric acid and found that it had to be greatly diluted to prevent gastric disturbances. The calcium butyrate is still more poisonous than the acid itself. 0.5 c.c. of a 12.5 per cent. solution of caclium butyrate were given by the mouth. In another series small doses of butyric acid were given. The experiments were continued from twelve to twenty-nine weeks. Calcification of the aorta was commonly found in these cases associated with calcareous deposit in the kidneys. Sclerosis was also present in the arteries of different organs. The changes in the aorta were accompanied by a fatty degeneration of the muscle cells, as well as a sclerosis of the vasa vasorum. He believes that these organic changes are the direct result of the butyric acid or its salts.

Syphilitic Leptomeningitis.—Very little attention has been given to the syphilitic lesions of the meninges unless gummata were present. Types of pachymeningitis of syphilitic origin were also recognized, but it was not until in 1908, when Duerck reported five cases of acute syphilitic leptomeningitis, that attention was attracted to this subject and active discussion begun. On the whole, the type described by Duerck was rather unusual. LE COUNT and DEWEY (*Jour. Infect. Dis.*, 1915, xvi, 142) studied the leptomeninges in a series of autopsies with the view of noting the presence of meningeal change in undoubted cases of syphilis as well as for the recognition of lesions of the meninges in conditions other than syphilis. They recognized three main types of changes in the pia: (1) opacity, (2) patches of fibrous thickening, (3) discreet focal lesions. Opacity of the pia is commonly present in a great variety of diseases. Its distribution is variable as is also the amount of opacity. Patches of fibrous tissue in the pia are not uncommonly associated with opacity and the two appear related. The focal lesions are more commonly seen at the base on the under surface of the frontal and temporal lobes and the pons and cerebellum. Vascular changes at the base were not infrequent, while pial hemorrhages were found in several cases. The nodular type of meningeal change is the one deserving particular attention, in connection with syphilitic meningitis. In all, the authors have described fifty-five cases. They concluded that the finding of meningeal lesions of a focal character necessitates the exclusion of syphilis as a cause before suggesting other infections as the etiologic factor. Such nodular lesions of the meninges should be given a value equal to lesions in other places as the aorta or liver for the final summing up of evidence for syphilitic infections. The arachnoid scars show that this membrane is one of the few places where organisms find conditions favorable for a limited multiplication after generalized spirochetemia. They point out that the evidence that alcohol may produce a fibrous meningitis is inadequate.

The Mechanism of Phagocytosis.—Much has been taken for granted in our conception of the manner in which animal cells ingest solid particles and the work of recent years has concerned itself with the more intricate points of bacterial destruction within the bodies of leukocytes. Kite and Wherry (*Jour. Infect. Dis.*, 1915, xvi, 109) suggest that foreign particles are taken up by leukocytes because the latter have sticky surfaces. These particles adhere to the cell and are carried into the interior by cytoplasmic streaming currents. This mode of dealing with foreign particles can be observed in the amebæ of the limax group, which, while in the trophozoit stage, are provided with sticky surfaces. These amebæ while in the motile flagellate stage are not sticky. The effect of opsonins upon bacteria is to cause their outer surface to become sticky. The authors repeated a number of tests with opsonins and found that when separately incubated mixtures of leukocytes and serum and serum and bacteria are agitated together, many of the bacteria stick to the leukocytes and are rolled into their substance. Such bacteria undergo digestion. Experiments with a minimum amount of agitation show that phagocytosis is reduced. They believe that bodies similar to bacteria stick to leukocytes best in the presence of unheated serum because they absorb something from the serum which makes them more sticky and hence their chances of adhering to the surfaces of the leukocytes are increased.

Multiplicity of Tumors.—Egli (*Cor.-Bl. f. schweiz. Aertze*, 1914, 449) studied the autopsy material of the Pathological Institute of Basle. In 4765 post mortem examinations, 966 tumors were found and of these 263 (27.2 per cent.) showed the presence of multiple tumors. The author classifies the various combinations of multiple tumors. He believes that the presence of multiple tumors is accidental and that there is no influence exerted by one type to induce the appearance of another. There was also lack of evidence of a predisposition for either benign or malignant tumors. The nature of a tumor is dependent upon the character of the cell component as well as the influence of the surrounding tissues. These two factors appear to guide the growth of tumor masses toward the benign or malignant types.

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